SPECIFICATION

SYSTEM AND METHOD FOR ANALYZING SALES PERFORMANCES

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0001] The present invention relates to a computer data processing system that is part of a management information system, and especially to a system and method for managing sales performances via distributed computers.

2. Background of the Invention

[0002] Globalized economic development has brought tremendous business opportunities to numerous enterprises, and has also brought more pressure to bear on these enterprises. To maintain keen competitiveness, an enterprise needs to improve its internal management, and to strengthen control in every step of its supply chains in order to efficiently allocate and use resources.

[0003] Computerized Sales Force Automation (SFA) systems and Customer Relationship Management (CRM) systems can assist in advancing an enterprise's sales competitiveness. These systems can reduce sales cycles, improve sales efficiency, and reduce sales overheads. For example, P.R. China patent application No. 1325082A entitled "Method for Managing Data on Products" discloses an information system for managing data on sales products. In this system, a plurality of distributed mobile terminals is used to read bar codes of products, and input data on products into a computer for processing. The system can enhance the efficiency of inputting product data, and avoid human error associated with manual data inputting.

[0004] However, the above-described information system can only obtain product data and perform simple statistical tasks. The system cannot thoroughly analyze sales information.

SUMMARY OF THE INVENTION

[0005] Accordingly, an objective of the present invention is to provide a system for analyzing sales performances which can assist in managing sales forces for enterprises.

[0006] Another objective of the present invention is to provide a method for analyzing sales performances which can assist in managing sales forces for enterprises.

[0007] In order to achieve the first above-mentioned objective, a system for analyzing sales performances in accordance with the present invention comprises a performance calculating module, a performance analyzing module, a performance querying module and a document updating module. The performance calculating module is used to calculate daily, monthly, and yearly sales performances in accordance with sales records. The performance analyzing module is used to analyze sales performances in accordance with daily performance records, statistical performance records and planning performance records. The performance querying module is used to query data on sales performances stored in the daily performance records, the statistical performance records and the planning performance records. The document updating module is used to update data stored in the daily performance records and the statistical performance records.

[0008] In order to achieve the second above-mentioned objective, a method for analyzing sales performances in accordance with the present invention comprises the steps of: (a) calculating daily sales performances in accordance with sales records, and storing the sales performances in daily performance records; (b)

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calculating monthly and yearly sales performances in accordance with data stored in the daily performance records, and storing the sales performances in statistical performance records; (c) querying the statistical performance records in accordance with an analysis instruction input by a user; and (d) analyzing sales performances in accordance with data stored in the daily performance records, the statistical performance records, and the planning performance records.

[0009] Other objects, advantages and novel features of the present invention will be drawn from the following detailed description of preferred embodiments of the present invention with the attached drawings, in which:

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] FIG. 1 is a schematic diagram of hardware configuration of a system for analyzing sales performances in accordance with a preferred embodiment of the present invention, the system comprising a plurality of client computers, an application server, and a database server;

[0011] FIG. 2 is a block diagram of function modules of the application server and the database server of the system of FIG. 1, and of communication between the application server and the database server;

[0012] FIG. 3 is a flow chart of calculating and analyzing sales performances in accordance with the present invention; and

[0013] FIG. 4 is a flow chart of details of one step of FIG. 3, namely calculating daily sales performances.

DETAILED DESCRIPTION OF PREFERRED

EMBODIMENTS OF THE INVENTION

[0014] Reference will now be made to the drawings to describe the present invention in detail.

[0015] FIG. 1 is a schematic diagram of hardware configuration of a system for analyzing sales performances in accordance with the preferred embodiment of the present invention. The system for analyzing sales performances comprises a three-layer information system. The three-layer information system comprises a data access layer, a business logic layer, and a presentation layer. The data access layer comprises a database server 121. The business logic layer comprises an application server 101. The presentation layer comprises a plurality of client computers. For the purposes of conveniently illustrating the preferred embodiment of the present invention, three client computers 111, 113, 115 are shown and described hereinafter. Computer communication networks 103, 105 interconnect all the above-mentioned apparatuses.

[0016] The application server 101 comprises core and mutable enterprise logic (such as rules, execution, and management) of the system for analyzing sales performances. The application server 101 processes input of users, and returns results of processing to users. The database server 121 has a database located therein, which stores all structured data on an enterprise. The database server 121 is used for managing processing of the stored data. Such processing includes reading, writing, deleting, modifying, and backup. The client computers 111, 113, 115 have the function of receiving orders input by users, and displaying results of implementation of such orders. The client computers 111, 113, 115 can be simple input/output devices known in the art.

[0017] FIG. 2 is a block diagram of function modules of the application server 101 and the database server 121, and of communication between the application server 101 and the database server 121. The application server 101 includes a performance calculating module 201, a performance analyzing module 202, a performance querying module 203, a document updating module 205, and a database connecting module 207. The database server 121 includes a database

managing module 210, a plurality of daily performance records 211 (only one shown), a plurality of statistical performance records 212 (only one shown), and a plurality of planning performance records 213 (only one shown).

[0018] Each daily performance record 211 is used to store daily sales performances, and comprises data on customers, channels of distribution, sales representatives, sales departments, distribution areas, product codes, product quantities and total values of products. Each statistical performance record 212 is calculated from a plurality of daily sales performance records. The statistical performance records 212 comprise monthly statistical performance records and yearly statistical performance records. Each statistical performance record 212 comprises data on customers, channels of distribution, sales representatives, sales departments, distribution areas, product codes, product quantities, total values of products, and periods of time the subject of the statistical performance. Each planning performance record 213 is used to store data on planned sales performances, and comprises data on sales departments, product codes, and planned product quantities.

[0019] The performance calculating module 201 is used to calculate daily sales performances in accordance with sales data stored in the daily performance records 211. The sales data comprise sales return records and records on reselling of sales returns. The sales return records are reductions in sales performances, and the records on reselling of sales returns are increases in sales performances. The results of the calculation are stored in the daily performance record 211. The performance calculating module 201 is also used to calculate monthly and yearly sales performances in accordance with data on daily sales performances, and to store results of the calculations to the monthly statistical performance records and yearly statistical performance records of the statistical performance records 212. The performance analyzing module 202 is used to analyze sales performances

relating to customers, products, sales departments, sales representatives and channels of distribution in accordance with data stored in the daily performance records 211, the statistical performance records 212 and the planning performance records 213. The performance analyzing module 202 can assist in obtaining implementation statuses of planned sales performances relating to customers, products, sales departments, sales representatives and channels of distribution. Users can thereby easily determine bottlenecks of sales. The performance querying module 203 is used to query data on sales performances stored in the daily performance records 211, the statistical performance records 212, and the planning performance records 213. The queried data comprise sales data on customers, channels of distribution, sales representatives, sales departments, distribution areas, product codes, product quantities and total values of products. The document updating module 205 is used to update data stored in the database server 121 in accordance with results of implementation of information by the performance calculating module 201. Such updating is performed via the database connecting module 207 and the database managing module 210.

[0020] The database connecting module 207 is used for connecting the application server 101 with the database server 121. The database connecting module 207 controls data communication between applications and source data. Applications of the application server 101 can access data stored in different database management systems (DBMSs) via the database connecting module 207. The database connecting module 207 can be founded on open database connectivity (ODBC). The database managing module 210 is used to manage data stored in the database server 121, including data stored in the daily performance records 211, the statistical performance records 212, and the planning performance records 213.

[0021] FIG. 3 is a flow chart of calculating and analyzing sales performances in accordance with the present invention. Firstly, in step S301, the performance

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calculating module 201 gathers data on sales performances for each day from product sales records, and calculates daily sales performances according to customers, channels of distribution, sales representatives, sales departments, distribution areas, product codes, product quantities and total values of products. The document updating module 205 stores the calculation results in the daily performance record 211. In step S303, on a designated day of every calendar month, the performance calculating module 201 calculates monthly sales performances in accordance with the daily performance records 211, and the document updating module 205 stores the calculation results in a monthly statistical performance record 212. On a designated day every year, the performance calculating module 201 calculates yearly sales performances in accordance with the monthly statistical performance records 212, and the document updating module 205 stores the calculation results in a yearly statistical performance record.

[0022] The system for analyzing sales performances has the function of querying sales performances. In step S305, the performance querying module 203 determines whether a query has been input. If no query has been input, the procedure proceeds directly to step S309 described below. If a query has been input, in step S307, the performance querying module 203 queries data stored in the database server 121 via the database connecting module 207 and the database management module 210, and displays the query results in the form of a diagram or a picture for the user.

[0023] The system for analyzing sales performances also naturally has the function of analyzing sales performances. In step S309, the performance analyzing module 202 determines whether an analysis instruction has been input. The analysis instruction comprises contrasting planned sales performances with actual sales performances, and calculating sales objective achievement rates of planned

sales performances relating to customers, products, sales departments, sales representatives and channels of distribution. The user can thereby easily determine bottlenecks of sales. If no analysis instruction has been input, the procedure is ended. If an analysis instruction has been input, in step S311, the performance analyzing module 202 analyzes sales performances in accordance with the analysis instruction.

[0024] FIG. 4 is a flow chart of details of step S301 of FIG. 3, namely calculating daily sales performances. In step S401, the performance calculating module 201 generates a new daily performance record for storing sales records for a particular day and a total sales value of the same day. In step S402, the performance calculating module 201 reads a sales record of the day from the database server 121. The sales record was input by the user when selling products via the client computers 111, 113, and 115, and comprises data on a type of the sales record and a date of the sales record. The type of the sales record comprises a sales return record and a record on reselling of sales returns.

[0025] In step S403, the performance calculating module 201 determines whether the sales record is a sales return record in accordance with the type of the sales record. If the sales record is not a sales return record, the procedure proceeds directly to S405 described below. If the sales record is a sales return record, in step S404, the performance calculating module 201 adds the sales record to the daily performance record 211, and subtracts a value of the sales record from the total sales value. In step S405, the performance calculating module 201 determines whether the sales record is a record on reselling of sales returns in accordance with the type of the sales record. If the sales record is not a record on reselling of sales returns, the procedure proceeds directly to S409. If the sales record is a record on reselling of sales returns, in step S407, the performance calculating module 201 adds the sales record to the daily performance record 211,

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and adds a value of the sales record to the total sales value of products of the daily performance record 211. In step S409, the performance calculating module 201 determines whether all sales records of the day have been incorporated into the daily performance record 211. If all sales records have been incorporated, the procedure is ended. If not all sales records have been incorporated, the procedure returns to step S402.

[0026] Although only preferred embodiments of the present invention have been described in detail above, those skilled in the art will readily appreciate that many modifications to the preferred embodiments are possible without materially departing from the novel teachings and advantages of the present invention. Accordingly, all such modifications are deemed to be covered by the following claims and allowable equivalents of the claims.